Research Article

Recruitment of African American and Latino Adolescent Couples in Romantic Relationships: Lessons Learned

Angelic Rivera, Dana Watnick, and Laurie J. Bauman

ABSTRACT

Background: *There is considerable literature on effective engagement strategies for recruiting adolescents individually for health research studies, but literature on recruiting adolescent couples is new and minimal.* ***Purpose:*** *This paper describes the recruitment strategies used for Teen Connections (TC), a longitudinal study that recruited 139 mainly African American and Latino adolescent couples in romantic relationships living in New York City.* ***Methods:*** *We collected data in Microsoft Access and documented the date each recruitment strategy was implemented, date each partner was enrolled, and amount of effort required to enroll participants. We identified individual and relationship characteristics from each partner's baseline survey.* ***Results:*** *We found that relationship type and characteristics, language used in printed materials, parental consent, implementing a screener questionnaire and gender of partner had implications for enrollment in TC.* ***Discussion:*** *Couples studies are highly demanding but achievable with dedicated staff and access to a large number of youth.* ***Translation to Health Education Practice:*** *Research on sexual health and risk often relies on individual reports of dyadic events. Adolescent couples' studies may not be pursued because of recruitment limitations, but they can provide invaluable insight into relationship dynamics, characteristics, etc. that may help design better health education interventions, and should be pursued nonetheless.*

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BACKGROUND

Young people of color in America are disproportionately affected by human immunodeficiency virus and other sexually transmitted infections.[1-3] An extensive body of research has documented sources of risk, patterns of risk behavior, predictors of condom use and persistence of unsafe sexual behavior.[1, 4-7] This literature is based predominantly on individual-level models of behavior, and findings show that condom outcome and efficacy expectancies, intentions to use condoms and perceptions of risk are related to safer sex behavior.[5-7] We believe that couple-level factors such as love, trust, future commitment, expectation of monogamy and actual monogamy are important predictors of condom use among teens, but these have been neglected. We began a five-year study of teenage couples called Teen Connections (TC), which required developing recruitment procedures that were effective, efficient and ethically sound. In this paper, we report our recruitment experiences to provide a base of information upon which others can build.

There is considerable literature on effective engagement strategies for recruiting adolescents individually for health research studies,[8-13] but research on adolescent couples is very new. To identify papers describing recruitment of both members of adolescent couples, we searched PsychInfo,

Angelic Rivera is a project director in the Department of Pediatrics, Albert Einstein College of Medicine/PIRC, 1300 Morris Park Avenue VE6B4, Bronx NY 10461; E-mail: Angelic.rivera@einstein.yu.edu. Dana Watnick is a project director in the Department of Pediatrics, Albert Einstein College of Medicine/PIRC, 1300 Morris Park Avenue VE6B23, Bronx, New York 10461. Laurie J. Bauman is a professor of Pediatrics and director of the Preventive Intervention Research Center in the Department of Pediatrics, Albert Einstein College of Medicine/PIRC, 1300 Morris Park Avenue VE6B25, Bronx, New York 10461.

Medline, and Eric using key words like adolescents, teenagers, couples and recruitment strategies. We did identify a few publications that addressed couple recruitment of young adults.[14-17] These studies provided helpful insights into recruitment of older youth, but they did not address the special issues involved in recruiting teens under age 18, such as the need for parental permission for study participation; ethical concerns over recruitment of adolescents named by teenagers as their sexual partner; the frequency of being in a private relationship (family is unaware of the romantic relationship); the inadvertent meaning that being invited into a couple study imposes on the couple; and the limited ability to schedule participation in a research study around familial and other obligations (e.g., having to baby-sit a sibling, pick up a family member from school, household chores). This paper will describe the recruitment strategies we implemented and their effects on couple enrollment. Retention strategies will be discussed in a separate manuscript.

PURPOSE

Teen Connections Project Description

Teen Connections was designed to document how different types, characteristics and duration of sexual relationships were related to condom use in early to middle adolescence. Relationship type was defined based on previous qualitative research as "committed/serious," "dating/seeing," "new," or "not serious."[18] Relationship characteristics we focused on were love, trust, future commitment, expectation of monogamy and actual monogamy.

We engaged in a two-step recruitment process for Teen Connections. The *first step* was to recruit youth into a screening study called the Teen Lifestyle Survey (TLS) a confidential, self-administered computer-assisted questionnaire. TLS is the single point of entry that we use at our Center to recruit teens into several ongoing studies. We recruited teens aged 14-17 for the TLS who had received any medical care in the last 18 months from any of seven general pediatric clinics affiliated with Montefiore Hospital in the Bronx, New York. The *second step* was to use responses from TLS to identify teens who met the eligibility for TC: live in the Bronx, NY; be in a heterosexual relationship for four or more weeks; have engaged in vaginal, oral, or anal sex with that partner in the past six months; read at least at a fifth grade-reading level, and be able to read, write and speak English fluently. Reading level was measured with the reading subtest of the Wide-Range Achievement Test-3 (WRAT-3),[19] administered by clinical interviewers when participants came to the Center. At the completion of the reading subtest, a raw score was calculated and converted to a grade score using the age specific norm tables of the WRAT-3. Teens who met eligibility criteria were called "index" teens and were invited to join TC with their partner. If more than one partner was eligible, we allowed index teens to choose the partner they wanted to enroll. Less than 4% of index teens had more than one eligible partner that met study criteria.

The Teen Connections study design combined qualitative and quantitative methods. The quantitative study was a longitudinal panel study of 139 adolescent couples (278 individual partners) at baseline; adolescents ranged in age from 14 to 20. Participants completed quantitative surveys every 3 months for 12 months regardless of whether they remained a couple over time, a total of 5 time points. We chose to follow up every three months to measure changes in relationships, particularly break-ups. Data from each partner were collected independently and confidentially. For the TC baseline survey both partners were encouraged to come in to our Center together to assure concurrency of baseline data collection, but they could come in separately as long as the surveys were conducted within one week of each other.

The TC qualitative study was a subgroup of 15 couples enrolled to participate in in-depth individual (separate) interviews (mean length 75 minutes) about their relationship. These couples were selected based on the length and seriousness of their relationship, and they completed four one-on-one qualitative interviews four to six months apart whether they remained together or not.

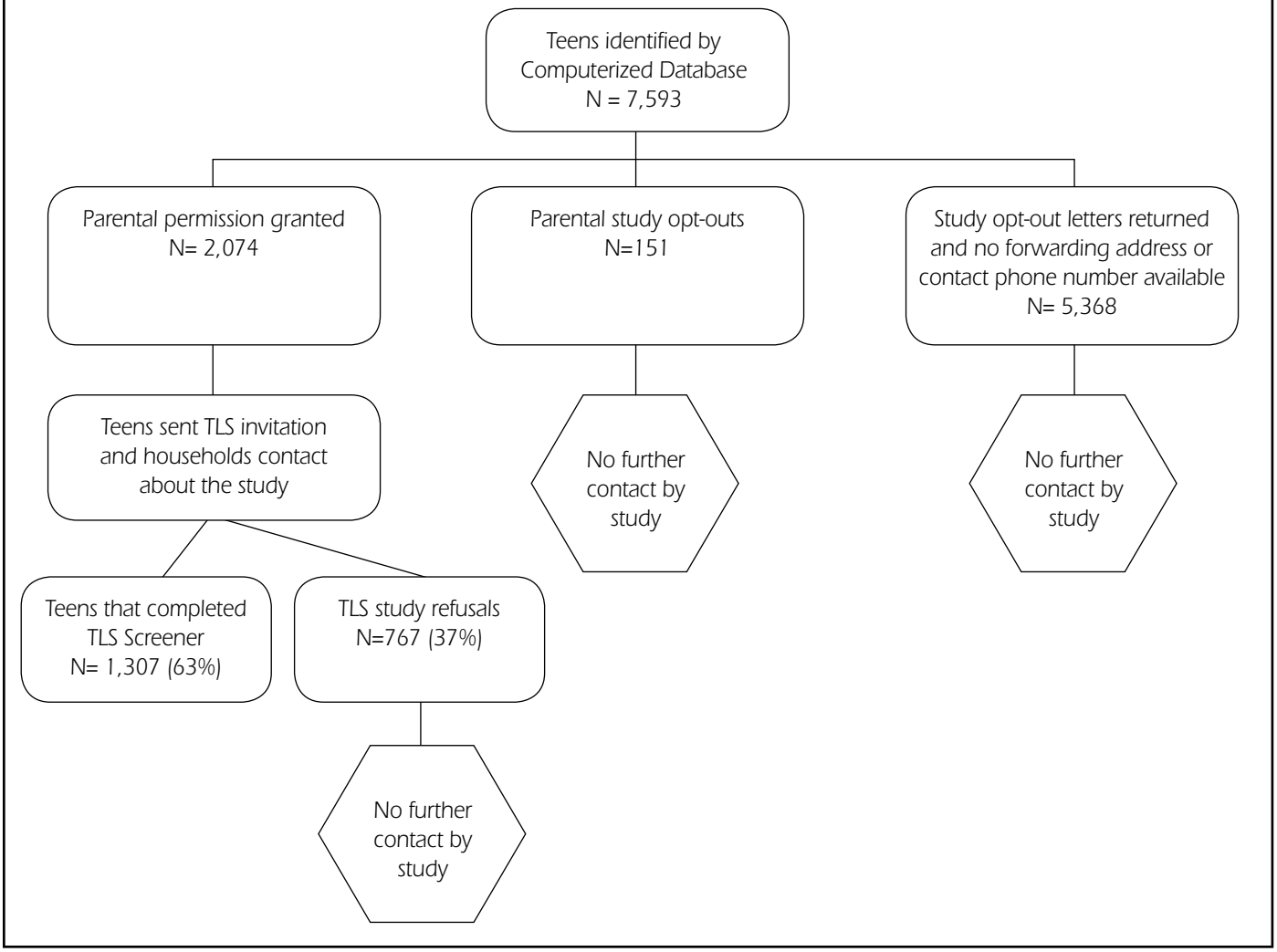
Recruitment of Adolescents to the TLS Screener

We recruited adolescents between the ages of 14-17 from a computerized database used for medical record keeping and billing at Montefiore Medical Center. Parents of youth identified through the database first received a letter in English and Spanish from the clinic where their child receives health care. The letter informed parents about the TLS screener and of their child's potential eligibility for participation in a further study. The letter told parents that, if they agree to the release of their child's name, address, telephone number and date of birth, this information would be passed on to the principal investigator and a TLS invitation would be mailed to their child. If parents preferred that their child's contact information not be released to the study, they were given two ways to opt-out: they could return the enclosed postage paid postcard to the clinic, or they could call a special number to request to opt out. Parents had three weeks from the date of the clinic letter mailing to opt their child out of receiving a TLS invitation. Neither the parent nor teen at this point had to make a decision about study participation. The opt-out letter only requested permission from the parent to allow the study to send their child a TLS invitation packet that provided more information about the study and the project consent form.

The database identified 7,593 adolescent patients that met age criteria, and clinics mailed their parents the study opt-out letter. Of the 7,593 letters mailed (Figure 1), 5,368 (71%) were returned because the family had moved and no forwarding address or phone number was provided and 151 (7%) parents declined permission to have their child's contact information shared with the study. Neither of these household types was contacted again. Excluding households whose letters were returned and parental opt-outs, 2,074 parents gave passive consent for their child to receive a TLS study invitation.

The mailed invitation explained that

Figure 1. Adolescents Identified by Computerized Clinic Database



youth were being invited to participate in the TLS, a confidential, computerized survey that takes about 90 minutes to complete and asks questions about school, peers, family, sexual behavior practices, and drug and alcohol use. Printed materials also informed parents and teens that after completion of the TLS, teens might be eligible for other projects. Five business days after the TLS invitation was mailed, study staff called teens to verify that they had received the printed materials and to answer any questions they or their parents may have had. Adolescents were given the option to come in any day during a six-week period to complete TLS. Surveys were conducted during after school hours, Saturdays, or by appointment to accommodate teens who attended school or worked. The project consent form had to be signed by both the teen and the teen's parent; parents were not required to accompany teens completing their survey. Data collection was conducted at our Center which is easily accessible by mass transportation. Adolescents who completed the TLS were given a $25 monetary honorarium.

Of the 2,074 youth who were mailed a study invitation and contacted via phone, 1,307 (63%) teens completed the TLS. Of the 767 study refusals, 549 parents and/or teens gave scheduling conflicts as the reason (worked, school activities or familial obligations such as babysitting a younger sibling or child) and 218 parents reported that their child was not allowed to participate due to being punished for misbehavior or poor grade report.

Enrollment of Couples into Teen Connections

The TLS screening questionnaire was completed by 1,307 adolescents (Figure 2), 62% (N=811) females and 38% (N=496) males, mean age 15.9 years. After teens completed the TLS, the project recruiter reviewed the quantitative data and identified 373 index teens who met study criteria for Teen Connections: currently in a heterosexual relationship for four or more weeks, and had sex with that partner (vaginal, oral, or anal) within the past six months. The project recruiter met with eligible index teens

immediately following TLS administration to explain the TC study and to make a preliminary determination of the eligibility of the index teens' partner. Partner eligibility criteria were age no more than four years older than the index teen, lives in New York City, at least a 5th grade reading level, and able to read, write, and speak English.

Reading level was measured with the reading subtest of the WRAT-3, [19] administered by clinical interviewers when referral partners came to the Center. At the completion of the reading subtest, a raw score was calculated and converted to a grade score using the age specific norm tables of the WRAT-3. Of the 373 partners referred by eligible index teens, 169 referral partners were ineligible during the in-person recruitment: 90 (53%) were ineligible due to age, 69 (41%) lived outside of the five boroughs of New York City and 10 (6%) self-reported to the study recruiter that they were Spanish-only speakers and were unable to read, write, or speak English fluently.

Over half of the referral partners were deemed ineligible due to age. Partner age criteria were imposed based on the goal of the study (to study relationships in early and middle adolescence) and ethical considerations. When enrolling youth in a study of sexual relationships the issue of statutory rape must be addressed. In New York State (NYS), statutory rape is defined as sexual abuse with the degree of abuse (e.g., 1st, 2nd, or 3rd degree) determined by the age of the victim and the defendant. In NYS, an individual is deemed incapable of sexual consent when he or she is less than 17 years of age.[20] However, individuals are exempt from prosecution for rape or criminal sexual acts under the following circumstances: (1) if the victim is between 15 and 17 years of age and the partner is less than 21 years of age; and (2) if the victim is between 11 and 15 years of age and the partner is less than 18 years of age or less than 4 years older than the victim.[20] We consulted with police and professional ethicists and discussed options with the funding agency. Statutory rape is not a mandated reporting offense per the child abuse or maltreatment regulation of the New York State Office of Children and Family Services, nor did we have any legal responsibility to report it to authorities because it was illegal. However, we decided not to enroll couples who met criteria for statutory rape, and we collected data on exclusion criteria to minimize the likelihood that we would learn of it by *not* collecting data on the age of partners on the TLS screener, and only asking during in-person recruitment if the partner he or she was referring was less than four years older. Index teens with partner(s) who were four or more years older were excluded from being invited to enroll in Teen Connections.

Because their referral partner was ineligible, we excluded 169 index teens. The remaining 204 index teens were told about Teen Connections and our interest in learning more about different types of adolescent relationships. Teens were also informed that in order to participate in TC, their referral partner would have to agree to participate as well. TC initially was approved by the Einstein Institutional Review Board (IRB) to recruit adolescents without requiring parental consent. We believed that requiring parental consent would increase study refusals by couples who were in private relationships, which would increase the risk of sample bias, with teens in public relationships more likely to participate. However, this approach introduced different barriers to recruitment and we changed study requirements to require parental consent. The rationale for changing from a waiver to a parental consent process will be discussed later in the manuscript.

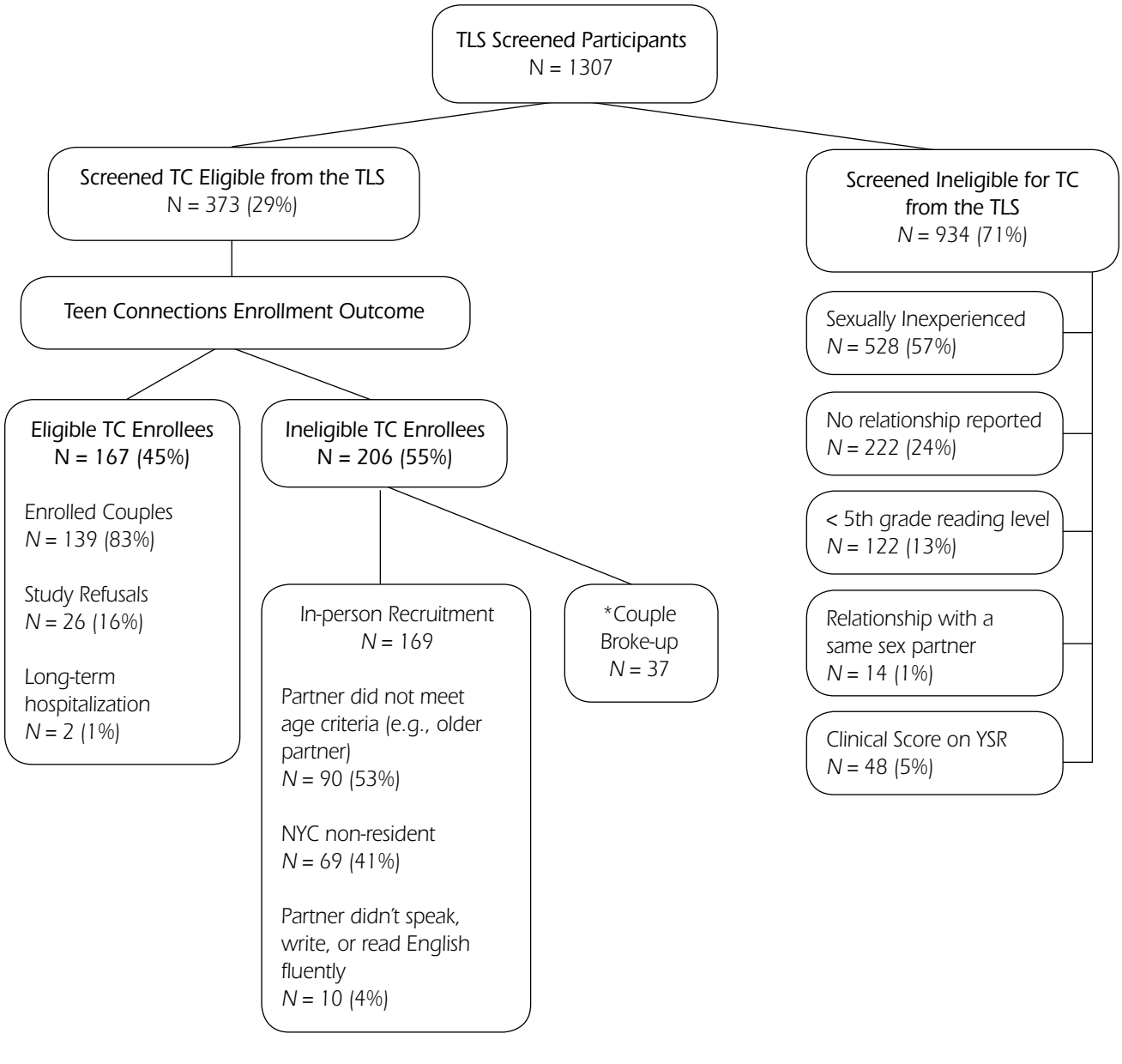
When enrolling couples we used a brokering plus invitation strategy coupled with a co-recruitment approach similar to those used with adult couples.[16] Eligible index teens were given two information packets, one for themselves and the other to be given to their partner. In order to avoid inadvertent disclosure of the relationship, neither packet stated that TC was a study for sexually active couples in romantic relationships. The printed materials were also sent to the household to be reviewed by parents and teens. It stated that the teen was being referred to a project called Teen Connections, a research study interested in learning about different types of teen relationships, and that the adolescent had been referred by another teen to participate. The project recruiter encouraged index teens to invite the person he or she was referring into TC via telephone from the study office. Index partners were told that if their referral partner consented to talking with study staff, the project recruiter would introduce herself, answer any of his/her study related questions, and request permission to send printed materials to the household. Printed materials mailed to the partner's home informed the partner that data will be collected independently and confidentially at our office, and that both teens will remain in the follow-up study even if they can no longer come in together. Couple partners were asked to come in within one week of each other to assure that the data were collected concurrently. Each partner was given a $30 monetary honorarium for completing the TC baseline survey. Of the 204 couples that were eligible to participate in the study as indicated by the TLS screener and after the in-person recruitment session, 18% (*N*=37) dissolved their relationship before completing their TC baseline survey and were no longer eligible for the study. Of the remaining 167 eligible couples, 139 couples (83%) were enrolled, 26 couples (16%) refused study participation, and 2 index teens (1%) reported that the referral partner was too ill to participate due to long-term hospitalization.

METHODS

Participants

Of the 139 enrolled couples, the majority of participants (73%) were partnered with someone of the same race/ethnicity: there were 67 Latino couples and 34 black couples. Of the mixed couples, 28 were black/Latino and 10 were Asian, white, or "other." Participant age varied by gender with boys averaging one year older than girls (17.8 yrs, SD=1.3 vs. 16.8 yrs, SD=1.1), respectively. Less than one-third of individuals (*N*=70) reported living with both biological parents:

Figure 2. Adolescents Who Completed TLS Screener



* These couples were initially eligible for study participation, however reported a break-up occurring between initial screener eligibility and study enrollment, therefore becoming ineligible.

44% (N = 122) lived with their mother only; 27% (N = 65) lived with neither biological parent.

Length of relationship was reported by boys as one and a half months longer on average than girls reported (1.3 yrs, SD = 1.2 vs. 1.1 yrs, SD = 0.9). Within couples, 111 (80%) agreed about the status of their relationship: 95 out of 139 couples (68%) agreed they were in a serious/ committed relationship; nine couples agreed that they were dating or seeing one another; and seven couples agreed they were in a relationship that was not serious. Eighty-five percent of girls and 84% of boys reported that their relationship was public, and 76% of the couples agreed that their relationship was public. We defined a public relationship as one where "most" or "all" of the participant's friends knew about their relationship and at least one parent also knew. When we examined how important the relationship was to girls and boys, 91% of girls and 87% of boys reported it being very or extremely

important to them, and 83% of the couples were in agreement that it was very or extremely important.

Data Procedures

We systematically studied how various recruitment strategies affected enrollment of adolescent couples. We collected data in Microsoft Access and documented the date each new enrollment strategy was implemented. The relationship type ("serious/committed," "dating/seeing," "new," or "not serious") identified by the couple from their surveys, the date each partner was enrolled, and the amount of effort required to enroll participants (mailings, calls, length of time from youth identification to enrollment). We also documented the questions and comments of youth during in-person recruitment sessions to identify areas of concern for individual partners and couples, and to better understand which printed materials were effective and which needed to be revised to minimize misconceptions about study requirements.

Recruitment Strategies

Although relatively few adolescents met eligibility criteria, our tailored recruitment strategies allowed us to successfully enroll 83% of eligible couples. We used both passive and active recruitment strategies with both index and referral partners. Study staff only contacted index and referral partners who provided their respective contact information directly to staff. Passive recruitment is defined as activities that do not involve in-person conversation and focus mainly on written materials that are clear, appealing to the target-group and powerful. We needed to rely on printed material at several strategic points: (1) clinic letters mailed to patient homes that requested permission for the clinic to share adolescent patient names and contact information with the TLS study team; (2) the TLS invitation packet that was mailed to index teens; and (3) the Teen Connections study invitation packet used to enroll the partner. Written materials always prominently displayed the study logo, were colorful and nonthreatening and were vetted by youth (teen participants in pre-study focus groups and a pilot). Packets included informational flyers and a formal letter on Center letterhead. Passive recruitment strategies also included sending email or text messaging reminders to partners to encourage them to come in to complete their baseline interview.

Active recruitment is defined by person-to-person contact, either by telephone or in person. Telephone contact was most common and most important and usually involved calling participants at home or on a cell phone to answer questions they or their parents had: to explain the importance of the study, to assure the confidentiality of the data collection and to assist partners to schedule their surveys.

RESULTS

Described below are logistical field challenges and engagement strategies that were implemented to recruit couples during the enrollment phase of the TC study.

Recruitment Efforts and Staffing Needs

The researchers have extensive experience recruiting children and adolescents for several clinical trials**,** but enrollment of teen couples was more challenging than anticipated. It took 25 months to screen 1,307 teens for the TLS and enroll 139 couples into Teen Connections.

Our study protocol stipulated for TLS and TC that no more than four calls per household should be made without response from the teen or parent. Recruiters, however, provided participants with as many survey reminders or project inquiry call backs as requested. On average, participants invited to complete the TLS were contacted six times by telephone prior to completing the TLS data collection. On average, four out of the six calls were either participant-requested reminder calls or calls from staff to reschedule a missed survey appointment. We made a total of 7,854 calls to youth, and an additional 3,413 calls to households that had a no answer, wrong or disconnected number for a total of 11, 267 calls conducted during the TLS screener phase of the study.

After the completion of the TLS screener, only 13% ($N = 167$) of teens were identified as eligible for Teen Connections. During the TC enrollment phase, the recruiter averaged 11 calls per eligible couple. On average, two calls were made to each partner for recruitment purposes the additional calls were couple requested. We found that most couples utilize the recruiter as a broker between the partners to schedule when they would come to the Center to complete the survey and to assist when a survey appointment had to be rescheduled. Over 1,830 calls were conducted to enroll the sample of 139 couples. These calls were made in conjunction with mailings that included information packets, interview reminder flyers, thank-you cards and address verification postcards.

Enrollment Implications for Serious and Non-Serious Relationships

We found that relationship type and characteristics had many implications for enrollment into the TC study. According to in-person recruitment notes and participant self-classification of relationship type, here we classify couples as either "serious" or not serious. Teens in participant-defined serious relationships frequently called or text messaged one another, saw each other several times a week, felt comfortable with the referral partner's participation and knew the other's schedule. In serious couples, partners expressed less concern with issues of confidentiality; the index teens were able to contact the referral partner more often from the office; referral partners were more likely to provide contact information directly to study staff, and index teens were more readily able to provide the study packet to their partner within one or two days.

Conversely, adolescents in non-serious relationships (friends with benefits, not that serious or dating/seeing one another) were more likely to spontaneously express concern over data confidentiality and referral partner participation. These index youth often acknowledged to the recruiter that they felt it was unlikely that the referral partner would participate since they rarely engaged in planned events together. In many instances, these index youth were unaware

of the referral teen's contact information making it unlikely that the index teen could contact the referral partner from the study office. Thus, the project recruiter seldom had an opportunity to speak directly with these referral partners and request permission to send printed materials to the household. Moreover, due to the couple's limited in-person interaction it was often not feasible for the index youth to provide the study packet to an eligible partner.

Omission of the Word "Partner" from All Printed Materials

When we created the first information packet for Teen Connections we had two goals: (1) to create materials that were easy to understand, and (2) to prevent inadvertent disclosure of the teen's sexual and romantic relationship. The printed materials were written to emphasize that the research study was interested in learning more about different types of adolescent relationships from both partners in a relationship.

During recruitment efforts with this first version, we found that most index teens expressed trepidation about the word "partner." This apprehension was expressed equally by boys and girls, but for different reasons. Boys thought the word "partner" signified a person you shared a serious, monogamous relationship with. Male partners questioned their eligibility for the study when they considered their relationship to be new or non-serious. Moreover, males were concerned that their partner would misconstrue their invitation to join the study, that is, that a partner would misperceive the invitation as an exclamation that the relationship was serious.

Girls, in contrast, associated the word "partner" with "sexual partner" and were more concerned about inadvertent disclosure of their sexual relationship to parents. Moreover, teens in our sample rarely used the terms partner, main partner, casual partner, or new partner when referring to one other. When speaking about the other they used terms such as "the person I am bringing to TC" or "the person who told me about TC." We revised the written materials to avoid implying to youth that we were only recruiting sexual partners in serious relationships. We omitted the word "partner" and replaced it with the terms youth themselves used, i.e., "the person you are referring" (the referral partner) and the "the person who referred you" (the index teen).

Following the implementation of the revised version of our printed materials, the recruiter noted a significant decrease among teens asking if the study was trying to recruit sexual partners in serious relationships. Of the 73 couples recruited with the revised version of the information packet, only one couple questioned if the study was looking to recruit adolescents in serious relationships. Also, no teens reported concerns or confusion with the terms we used to replace the word "partner" in the materials.

Parental Consent: Waiver vs. Active Protocol?

Traditionally, research conducted with adolescent minors requires parental consent for participation. However, required parental consent can lead to smaller samples as well as sample bias.[21-25] We reasoned that requiring parental consent for *couple* recruitment could double and compound this bias. Therefore, we requested and obtained approval from the Einstein IRB to proceed without parental consent, with the stipulation that parents of both the index and referral teen would be notified about the study. To comply, we designed a two-step consent waiver protocol.

Waiver Protocol

The first step of the waiver protocol required that index teens (those deemed eligible for Teen Connections) give a letter to the referral partner. The letter explained the study briefly; if the referral partner was interested in learning more about the study, he or she had to contact our office and provide his/her parents' contact information. Then, we used that contact information to send the referral partner's parents a study opt-out letter, which requested permission to send their child an invitation to participate in the Teen Connections study. Index and referral participants received a copy of the same opt-out letter so they could see how the study was described to their parents and be reassured that we did not disclose that they were in a sexual relationship. Due to IRB restrictions, the research staff was not allowed to contact the referral partner directly, even if the index teen volunteered his or her contact information, unless the partner was 18 or older. The first contact with the project had to be made by the referral teen.

After the referral partner called in and provided his or her contact information to the study team directly, the study recruiter mailed the opt-out letter to the referral partner's parents; parents had three weeks from date of mailing to decide whether they denied permission for staff to mail a study invitation packet to their teen. Parents also had the opportunity to call the TC office if they had questions about the study. Neither the parent nor teen at this point had to make a decision about study participation. The opt-out letter only requested permission from the parent to allow the study to send their child a TC invitation packet. For parents who did not want their child to receive a study invitation, they could opt their child out by telephone or by returning a postage paid postcard. Parents who did not object to their child receiving a TC study invitation needed to do nothing.

The second step of the waiver protocol, which was initiated unless the referral parent denied permission, was that each member of the couple was mailed a TC study invitation packet and a project consent form. The invitation defined available date and time windows when partners could come in to our Center to complete baseline surveys. Teens were provided a four week window to decide whether to participate in TC. Enrollment in Teen Connections was considered complete when both teens completed their baseline data collection.

Of the 94 couples eligible for enrollment using the waiver consent protocol, 70 couples (75%) were enrolled into TC, two couples were unable to participate due to the referral partner's long-term hospitalization, and 22 couples (23%) refused study participation. The most common reason for

refusal was the referral partner's reluctance to call our office.

In an effort to further understand difficulties with our two-step procedure, our project staff conducted brief phone interviews with enrolled participants as well as refusers. Of the 70 couples enrolled with the waiver protocol, fifty-eight (83%) index partners reported that having to encourage their partner to call our office to provide their contact information as stressful due to the numerous reminders required of them. Over three-quarters of enrolled referral partners reported concern that study staff would give unsolicited advice about their relationship and/or that having to make the first contact was inconvenient. We also asked enrolled couples for suggestions on how we could simplify the recruitment process. Eighty-four percent (N = 59) of the waiver-enrolled couples reported that having a process similar to a school permission slip, that a parent would sign for their child to attend a field trip, would be less of an inconvenience. Similarly, we asked the 22 index teens who refused study participation with the waiver protocol for suggestions on how we could make the recruitment process more engaging. Of these refusals, 19 (86%) index teens reported that eliminating the step where partners were required to call our Center would make the process easier and less threatening for their referral partner. Based on the feedback we received, we piloted a new one-step recruitment protocol that required parental consent.

Parental Consent Protocol

In the parental consent protocol, the referral partner received a study invitation both from the index partner and by mail from the study team. The packet included detailed study information and a consent form that required a parent's signature. This protocol eliminated the need for referral partners to call our office, eliminated the study opt-out letter being mailed to parents, and eliminated the waiting period for passive consent from parents. It did add the requirement of parental consent for referral partners' participation. Of the 73 couples recruited with the new one step protocol, 69 couples (95%) enrolled in the study and four couples (5%) refused study participation. The four refusals were due to one or both members in the relationship reporting scheduling difficulties due to school or work obligations.

We were concerned that requiring parental consent would increase study refusals by couples who were in private relationships, leading to a sample bias with teens in public relationships more likely to participate. This was not the case. For those teens in private relationships, there was no difference in enrollment rates if they were recruited via the waiver or the parental consent process (65% vs. 63%, respectively), and for those in public relationships there was an increase in enrollment, from 80% to 96% (P<0.01). (Table 1) The process was reportedly less awkward and challenging and the couple enrollment was quicker (10 days vs. 7 days, respectively).

In addition to increased enrollment rates for couples in public relationships, we saw a similar increase in other types of couples when we changed our recruitment protocol from using a parental waiver to requiring parental consent. (Table 1) According to index partner reports, couples that reported being "in love" or in a "serious/committed relationship" enrolled at significantly increased rates when recruited using the parental consent protocol. Couples that were not in love or serious/committed continued to enroll at similar rates regardless of recruitment protocol. Gender, length of relationship and age of index participant were not associated with increase in enrollment when the recruitment protocol changed. Blacks were the only demographic group that showed a

Table 1. Couple Enrollment by Index Partner Characteristics

	Waiver Protocol (% Enrolled)	Parental Consent Protocol (% Enrolled)
In Love with Referral partner		
Yes*	81.70%	93.90%
No	60%	77.80%
Public relationship (at least 1 parent knows)		
Yes**	79.70%	95.50%
No	64.70%	62.50%
Serious/Committed Relationship		
Yes*	84.50%	96.60%
No	63.60%	75%
Gender		
Male	61.50%	87.50%
Female	83.10%	94.10%
Ethnicity		
Latino	79.60%	90.00%
Black*	70.00%	95.70%
Length of Relationship	1.07 yrs (.92)	1.26 (1.15)
Age of Index Partner	16.79 (.85)	16.57 (.82)

*P < 0.05; **P <0.01
All independent variables were significance tested using chi-squares except for 'Length of Relationship' and 'Age of Index Partner,' for which we used t-tests.

significant increase in enrollment when we changed protocols (from 70% to 96%).

Fictional Partners

We considered but rejected the possibility of advertising for adolescent couples to enroll in the study. In addition to the bias introduced by a volunteer sample, we feared that some adolescents would "recruit" a fictional partner in order to participate and receive the $30 monetary honorarium. We preferred a procedure that would use the Teen Lifestyle Survey to identify eligible youth to avoid this since partner data could be reviewed and couple status verified prior to the teens being invited into Teen Connections. The use of the screener to verify couple status was a necessary procedure. Of teens who initially screened eligible for TC, 8% (N=17), tried to bring in a fictional partner, usually a friend, cousin, or classmate. Without the screener it would have been nearly impossible to identify fictional partners. When these incidents occurred we spoke with the index teen to assess whether it was intentional or a misunderstanding. In all 17 cases, index teens reported that the monetary incentive motivated them to try to remain in the study regardless of change in eligibility status; typical status changes were break-ups or referral partners who did not want to participate.

Implications of Recruiting Couples through Male Partners

Almost all previous research of adult heterosexual couples started with a female as the index partner and a male partner recruited through her. We considered whether to recruit couples solely using girls as index partners or to permit both boys and girls to be identified as index partners. We conducted a pilot with 16 adolescent couples, where 8 of the couples were recruited using a male index partner and the other 8 were recruited through a female. Regardless of index partner gender, couple recruitment was equally successful and without incident. Based on this pilot recruitment experience, we decided to proceed with couple recruitment through either partner.

The flexibility of recruiting couples through either the male or female partner was an advantage to the study's overall enrollment target. We found through TLS that boys reported fewer relationships that qualified them to be in Teen Connections than girls. Further, eligible couples where the boys were the index partners were less likely to enroll in the study than couples where the girls were the index partners (74% vs. 88%; P<0.05). Of the 139 couples enrolled, 37 (27%) couples were enrolled using a male index partner. Despite there being fewer male index partners to begin with, and a lower rate of enrollment when the male was the index partner, including males did increase the overall rate of couple enrollment into the study.

Potential for Inter-Partner Violence

A main concern in implementing this study of young couples was assuring the confidentiality and the safety of each partner. Several studies[16, 17, 26] have raised concerns that measures of condom use can raise issues of infidelity or lack of trust that might cause tension in the relationship, possibly threaten the stability of the relationship, or of more concern, cause conflict between partners leading to potential intimate partner violence. We addressed these concerns seriously by taking steps to protect the safety and privacy of each partner during couple enrollment: (1) each partner was given the opportunity to interact with study staff privately to express any concerns; (2) during every data collection point each partner was placed in a separate data collection room to avoid either partner seeing or reading the other's responses; and (3) survey data or other personal information was never shared between partners. At the time of this publication, no adverse events were reported.

Lessons Learned

We have identified eight lessons learned that were pivotal to recruitment efforts. First, studies of youth in general, and of young couples in particular, must not underestimate the staffing required to handle the intensive day-to-day logistical field needs of the study. In our experience a small, tight team of trusted staff was essential to respond to time-sensitive correspondence within 1-2 days, to distribute study materials within a designated time frame, and to document all recruitment efforts throughout the study. Second, research studies recruiting adolescent couples need to understand how words may carry unknown and/or unintended meanings for participants in romantic relationships. In particular, the word "partner," a common term used in many measures of sexual risk behavior, has multiple meanings for youth, different for boys and girls, and may cause a recruitment bias. Third, when recruiting adolescent couples, studies should avoid burdening the index respondent with responsibilities for recruiting their partner, such as passing on study materials or making phone call reminders. Half-way through our study we recognized that our waiver protocol posed several recruitment challenges because of the burden placed on the index partner. In effect, index teens were placed in the role of broker between the project recruiter and the referral partner, and many teens reported that the process was overwhelming for them. Fourth, studies recruiting adolescent couples should consider using a screener questionnaire to verify the legitimacy of the dyadic relationship since it was our experience that a monetary incentive did encourage some teens to create a fictional partner. Fifth, a couples study may prove to be less burdensome to teens that are in serious relationships compared to those in non-serious relationships. It was our experience that partners in serious couples are more likely to engage in planned events and socialize with one another, while teens in non-serious relationships often had no expectation of calling or seeing each other. Thus, studies working with adolescent couples need to consider flexible and fluid approaches (e.g. extending enrollment periods, providing materials in-person and via mail, collecting data separately for each partner) so that enrollment includes couples who socialize infrequently. While we were successful in enrolling 83% of couples eligible for Teen Connections, screened participants who reported their relationship as "not serious" were more likely to refuse study participation than teens engaging in relationships they described as serious and important. We

believe refusals from teens in non-serious relationships stem from the limited interaction these couples have. Thus, the ability to talk to the partner to provide an invitation to the study and schedule a date to come in to complete an interview was not feasible and posed the most challenge during recruitment efforts. Sixth, for studies recruiting adolescent couples, incorporating parental signature may not interfere with participation. However, special consideration needs to be given to ensure the following are not reported on the consent form: (1) disclosing it is a couples study, (2) disclosing the study is recruiting sexual partners, and (3) referring to the members in the relationship as partners. Seventh, adolescent couples can be recruited through male partners and did increase the overall rate of couple enrollment into the study. Eighth, interpersonal violence is an issue that requires special attention in couple studies. In terms of data collection procedures, one approach that was effective for ensuring confidentiality and safety of both participants was to use separate data collection rooms. This eliminated the possibility of inadvertent disclosure of survey responses from one partner to another, and the potential conflict or violence that could ensue.

DISCUSSION

Recruitment of adolescent couples can be perplexing even for the most experienced researchers. To date, we found no publications that address recruitment of adolescent couples where both partners are recruited and one or both are under the age of 18. Recruiting teen couples in romantic relationships is feasible but demanding. Teen Connections revised its recruitment protocol two times and printed new materials several times in a two-year period. Strategies that were successful at recruiting adolescents individually did not meet with success when implemented with adolescent couples. Moreover, the response time in revising an ineffective protocol was as critical as the new protocol developed.

We have identified several principles from our experience in recruiting adolescent couples. First, parents are gatekeepers to their child's participation. We often see parental consent as a burden or barrier to study participation and several studies have reported biased recruitment attributable to this requirement. [21-25] However, we believe that parental consent can be compatible with study recruitment and shouldn't be ruled out. Second, it is important for the study staff to be the primary recruiters. As a general principle, the study should be responsible for recruitment rather than burdening participants with recruiting their partners. Third, access to a very large number of youth is needed to recruit couples in romantic relationships. There are multiple challenges to recruiting an individual teen such as logistics, study eligibility, and the role of their parent. Recruiting teen dyads more than doubles these challenges because of each partner's study availability as well as inter-partner dynamics that may further impede study participation.

Limitations

There are several limitations to acknowledge. First, Teen Connections did not have an intervention arm, thus the study requirements for couples were not as demanding as intervention protocols, but also we did not have a program to offer youth as an incentive to enroll. Second, our sample consisted mainly of African American and Latino youth living in New York City and our findings may not be generalizable to youth of other ethnicities or those living in other geographical regions. Third, over two-thirds of our sample reported being in a serious/committed relationship, and our procedures may not be as appropriate or efficient for recruiting those in newly formed or non-serious relationships. Finally, although our opt-out letters were available in Spanish and English, our TC parental consent forms were only written in English. For those participants recruited through the parental consent process, we may have limited the number of eligible teens because their parents were Spanish-only speakers and, therefore, could not give consent.

Future Recommendations

We encourage researchers to share their recruitment experiences and strategies. Studies should track empirically how changes in recruitment approaches affected recruitment rates. By identifying the kinds of teens that are hard to reach, flagging participants with unstable living arrangements, and calculating the number of contact points required for study completion, we can better understand which recruitment efforts are most effective and efficient.

TRANSLATION TO HEALTH EDUCATION PRACTICE

Adolescent sexual behavior is rightly considered to be of vast importance due to the risk of contracting sexually transmitted diseases. This preoccupation on adolescent sexual behavior and its risks has ironically lead to the neglect of an essential ingredient to the understanding of this very topic, the nature of adolescent romantic relationships in which most of this sexual behavior occurs.[27-28] The study of individuals in a relationship and the study of the relationship as a dyad require two different levels of analysis with the study of dyads involving characteristics that are inherently relational, embedded in a relational context that has its own trajectory. [28-29] Little information about adolescent relationships has been collected from both members of the dyad rather than a single partner. However, individual perceptions often are not adequate to evaluate the functioning of the couple because there may be discrepancies between partner reports. Relationships are influenced by the interaction of the partners' characteristics, their feelings toward each other, their history and their expectations.[28] Thus, methodologies that address subjectivity, examine how individual-level and dyadic-level variables interface, and develop strategies for interpreting discordant information are an important next step for theory and research on adolescent relationships. Moreover, further study is needed to develop theoretical and methodological approaches for adolescents that address the formation, progression and dissolution of individual relationships and the changing of relationships over time as adolescents move from early to middle

to late adolescence.[27] Adolescent couples' studies may not be pursued because of recruitment limitations, but they can provide invaluable insight into relationship dynamics, characteristics, etc. that may help design better health education interventions, and should be pursued nonetheless.

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